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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,333	04/28/2006	Tomohisa Yamada	0171-1270PUS1	8031
2292 7590 12/01/2008 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER				
FANG, SHANE				
ART UNIT		PAPER NUMBER		
4131				
NOTIFICATION DATE		DELIVERY MODE		
12/01/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

# Office Action Summary

**Application No.**

10/577,333

**Applicant(s)**

YAMADA ET AL.

**Examiner**

SHANE FANG

**Art Unit**

4131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/US)  
Paper No(s)/Mail Date 12/20/2007.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claim 6 is rejected on the ground of nonstatutory double patenting over claim 2 of U. S. Patent No. **7358660 B2** since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent. The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: there is no structural difference on between the structures shown in claim 2 of the reference and in instant claim 6. The reference is silent on "electron accepting compound" recited in instant claim 6. However, the carbenium structure as recited in claim 6 is an obvious and known electron accepting compound due to its structure.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3-4, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by **Ong et al. (US 4983482 A)**.

*Ong et al.* discloses charge transporting compounds (Col 9-10, structures II-V) that anticipates Formula 1 as recited in claims 1 and 3.

As to claim 4, *Ong et al.* discloses charge transporting compounds (Col 18, II 32, Example 1) that anticipates Formula 2 as recited in claim 4. Note “-R<sup>4</sup>” group shown in Formula 2 can be considered to be attached to the left side of the 9 position of fluorene when Formula 2 is drawn as a polymeric backbone.

As to claim 7, *Ong et al.* discloses charge transporting compounds is applied a (coating) layer (vanish) in claim 1.

***Claim Rejections - 35 USC § 102/103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **Ong et al. (US 4983482 A)**.

*Ong et al.* discloses charge transporting compounds (Col 9 and 10, structures II-V) that anticipates Formula 1 as recited in claims 1 and 3. *Ong et al.* is silent on the number average molecular weight. In view of the substantially identical composition, the adduct would possess the claimed crystallization properties. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to applicants to show otherwise. In re **Best**, 562 F. 2d 1252, 195 USPQ 430 (CCPA 1977); In re Fitzgerald, 205 USPQ 594 (CCPA 1980). See MPEP § 2112.

#### ***Claim Rejections - 35 USC § 103***

7. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ong et al. (US 4983482 A)** as applied to claims 1-4 above, and further in view of **Webb et al. (US 6444768 B1)** and **Tazuke et al. (US 4226967 A)**.

*Ong et al.* discloses charge transporting compounds (Col 9 and 10, structures II-V) that anticipates claims 1 and 3-4 and anticipates/shows obviousness to claim 2. *Ong et al.* is silent on further comprising "electron accepting compound" as recited in claims 5-6.

As to claim 5, *Tazuke et al.* discloses the motivation of forming charge transfer complex in the form of polymer film by solution cast of mixture of an electron acceptor with a high molecular electron donor (Col 7, II 15-25). *Tazuke et al.* is silent on electron

acceptor, such as carbenium recited in claim 6, and a high molecular electron donor, such as charge transporting compound with pedant triphenylamine groups recited in claims 3-4.

As to claim 6, *Webb et al.* discloses stabilizing initiators (Col 2, ll 4-20), wherein some species (n=1) of disclosed formula anticipates Formula 3 as recited in claim 6. *Webb et al.* is silent on the "electron accepting compound". However, the carbenium structure as recited in claim 6 is an obvious and known electron accepting compound due to its structure.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated disclosures of *Ong et al.*, *Webb et al.*, and *Tazuke et al.* to develop charge transporting organic material comprising a charge transporting compound recited in claims 1-4 and an electron accepting compound as recited in claims 5-6. The suggestion/motivation would have been to form polymer films/coatings/varnishes of the composition thereof.

***Claim Rejections - 35 USC § 103***

8. Claims 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Murata et al. (US 6143433 A)**, and further in view of **Ong et al. (US 4983482 A)**.

As to claims 8-9, *Murata et al.* discloses an organic electroluminescent device having containing thin film of charge injecting/transporting layer (Abstract). *Murata et al.* is silent on charge transporting compound as recited in claims 3-4.

As to claim 10, *Ong et al.* discloses charge transporting compounds (Col 9 and 10, structures II-V) as hole transporting layers (Title). *Ong et al.* discloses charge

transporting compounds containing fluorene and triphenylamine segments (Col 9 and 10, structures II-V) that anticipates claims 3-4.

As to claim 11-13, *Murata et al.* teaches adding triphenylamine based material for promoting hole injection in the charge transporting layer (Col 7, ll 37-50). *Murata et al.* further teaches adding fluorenone derivatives (similar structure and function as fluorene segments on formulas recited in claim 3-4) for promoting electron injection and transport (Col 7, ll 37-50). *Murata et al.* is silent on charge transporting compound as recited in claims 3-4, which contains pendant triphenylamine groups and fluorene segments. *Murata et al.* discloses the motivation of enhancing the ability of electron/hole transporting (Col 7, ll 37-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated disclosures of *Murata et al.* and *Ong et al.*, to develop organic electroluminescent device wherein the charge transporting organic material having structure as recited in claims 3-4 and working as thin films of hole transporting, hole injection, electron transporting, and electron injection as recited in claim 8-13. The suggestion/motivation would have been to enhance the ability of electron/hole transporting.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHANE FANG whose telephone number is (571)270-7378. The examiner can normally be reached on Mon.-Thurs. 8 a.m. to 6:30 p.m. EST..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571)272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ling-Siu Choi/  
Primary Examiner, Art Unit 1796

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